

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jonghill Hong  
Serial No.: 10/664,066  
Conf. No.: 3251  
Filed: September 16, 2003  
For: MAGNETORESISTIVE SPIN-  
VALVE SENSOR AND  
MAGNETIC STORAGE  
APPARATUS  
Art Unit: 2862  
Examiner:

*I hereby certify that this paper is being deposited with the United States Postal Service as FIRST-CLASS mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this date.*

*11 Feb 04*

Date

*[Signature]*

Registration No. 29,367  
Attorney for Applicant(s)

INFORMATION DISCLOSURE STATEMENT

Mail Stop Missing Parts  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This IDS is submitted under 37 C.F.R. §1.97(b) within either of the following time periods, whichever occurs last:

- (a) within three months of either the filing date of the national application or the date of entry into the national stage; or
- (b) before the mailing date of first office action on the merits (i.e., not including actions such as restriction requirements).

Applicant(s) submit herewith Form PTO-1449 (Information Disclosure Citation) together with copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 C.F.R. §1.56. Applicant(s) respectfully submit that the citation of any reference on Form PTO-1449 does not constitute an admission that the reference qualifies as prior art.

It is requested that the information disclosed on the enclosed Form PTO-1449 be made of record in this application.

**A copy of the Search Report for PCT/JP01/09447 is enclosed. A written opinion mailed on October 25, 2002 in PCT/JP01/09447 is also enclosed.**

The Commissioner is hereby authorized to charge any additional fees which may be required to this application under 37 C.F.R. §§1.16-1.17, or to credit any overpayment, to Deposit Account No. 07-2069. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

300 South Wacker Drive – Suite 2500  
Chicago, Illinois 60606  
Telephone: (312) 360-0080  
Facsimile: (312) 360-9315  
Customer Number 24978

By: *[Signature]*

Patrick G. Burns  
Registration No. 29,367

Form PTO-1449 U.S. Department of Commerce (Rev. 8-88) Patent and Trademark Office  INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	Attorney Docket No.: 0941.68363	Serial No.: 10/664,066
	Applicant: Hong et al.	
	Filing Date: Sep. 16, 2003	Group: 2862

## U.S. PATENT DOCUMENTS

Examiner Initial*	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	6,181,534	Jan. 30, 2001	Singh			

## FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
	10-313138*	Nov. 24, 1998	Japan			Abs.	

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Hong et al.; "Effect of Thin Oxide Capping on Interlayer Coupling in Spin Valves"; <i>IEEE Trans. on Magnetics</i> ; Vol. 36, No. 5; September 2000; pp. 2629-2631

Examiner	Date Considered
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\*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**\*This reference was previously submitted, but the copy of the reference might have been incomplete.**